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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/608,645	06/30/2000	Brian M. Leitner	219.38119X00	9499

20457 7590 06/17/2004

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EXAMINER

CHOUDHARY, ANITA

ART UNIT	PAPER NUMBER
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2153

10

DATE MAILED: 06/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/608,645

Applicant(s)

LEITNER ET AL.

Examiner

Anita Choudhary

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

The amendment filed on April 2, 2004 has been entered. Claims 1, 10, and 19 have been amended and are presented for further examination.

Claims 1-21 are presented.

Response to Arguments

Applicant's arguments filed April 2, 2004 have been fully considered but they are not persuasive.

Applicant has amended claims 1 and 10 and argues that amended subject matter, particularly, "wherein valid bit is indicative of whether at least one response is expected," is neither shown nor suggested by the prior art citation by Muller et al (US 6,453,360). Examiner respectfully disagrees with this assertion. Muller shows an operational code which functions to provide information to DMA engine to assist in the re-assembly of the data packet. In addition, important flags are set to indicate more data is likely to come or not. For example, flags are checked to indicate if more data is to follow (see fig. 6B, 618-626) and operational codes indicate flows that are expected to follow (col. 44 lines 52-53 and col. 45 lines 26-35).

Applicant has amended claim 19 and argues that amended subject matter, particularly, "a receive queue engine partitioned from the send queue engine," is neither shown nor suggested by the prior art citation by Dobecki (US 6,611,879). Examiner respectfully disagrees with this assertion. Dobecki shows a message engine further comprising of packetizer and depacketizer (428p, 428d, fig. 7), wherein receive and send functions are separated.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-18 are rejected under 35 U.S.C. 102(e) as being anticipated by Muller et al (US 6,453,360).

In referring to claim 1 and 10, Muller shows a system for high performance network interface for receiving and transferring packets in conformance with a number of processing function to increase efficiently of packet handling. Muller shows:

- Request packet transmitted by the network interface (col. 53 lines 40-44, col. 54 lines 32-43).
- Writing the packet sequence number (flow number) of the request packet to a location in a circular send queue (col. 56 lines 51-65) pointed to by the write pointer (fig. 9 916) and setting a valid bit (flow validity indicator and operational code, fig. 6b, 622-624, col. 44 lines 17-48).
- Incrementing the write pointer if the packet is read request (col. 55 lines 39-41, col. 41 lines 51-63), or clearing a read indicator at the location in the queue if the packet is not a read request packet (col. 42 lines 1-15)
- For every response packet received by the network interface (col. 41 lines 22-29).

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- Checking the packet sequence number (flow sequence number 522) of the response packet against the packet sequence number stored in at a location in the circular send queue point to by the read pointer of the circular send queue (col. 41 lines 56-col. 42 line 23).

In referring to claim 2 and 11, the packet is dropped if the valid bit at the location in the queue is not set (col. 106 lines 5-35).

In referring to claim 3 and 12, Muller shows a response packet is accepted if the valid bit (flow validity indicator 520) at the location in the queue pointed to is set and the packet sequence number (flow sequence number 522) of the response packet is equal to or less than the packet sequence number written at the location and greater than the last acknowledged packet sequence number (col. 56 lines 42-55).

In referring to claim 4 and 13, Muller shows that if response packet is read response packet, it is accepted if the sequence number is equal to the packet sequence number written in the queue and the read indicator (SYN bit) is set (col. 42 lines 16-23).

In referring to claim 5 and 14, if the response packet is accepted, the valid bit (flow validity indicator, col. 44 lines 30-34) at the location in a queue is cleared and if the packet is a read response packet, the read pointer (506) is incremented (col. 43 lines 16-55).

In referring to claim 6 and 15, Muller shows for every request packet received,

- If the request packet is a read request packet, then setting the read bit at the location in the queue pointed to by the write pointer (502) and incrementing the write pointer (col. 43 lines 1-55).
- If the request packet is not a read request packet, then clearing the read bit at the location in the circular receive queue pointed to by the write pointer (col. 42 lines 24-35)

- Reading the packet sequence number (522) and the valid bit at a location pointed to by the read pointer of the queue (fig. 5 col. 41 lines 45-55).

In referring to claim 7 and 16, Muller shows a response packet is transmitted if the valid bit at the location pointed to is set (col. 43 lines 40-55).

In referring to claim 8 and 17, Muller shows a read response packet is transmitted if the read bit at the location is set (col. 41 lines 56-62).

In referring to claim 9 and 18, Muller shows the valid bit (520) at the location is cleared and if the response is a read response, the read pointer is incremented after the response packet is transmitted (col. 43 lines 53-55).

Claims 19-21 rejected under 35 U.S.C. 102(e) as being anticipated by Dobecki (US 6,611,879).

In referring to claim 19, Dobecki shows a network interface (fig. 7) comprising:

A transmitter (418)

A receiver (424)

A send queue context memory (312S, col. 17 lines 52-57).

A receive queue context memory (312R, col. 17 lines 52-58).

A send queue engine (ME 315: 428p) connected to the send queue (312S) context memory and the transmitter and the receiver (col. 16 lines 40- col. 17 line 2).

A received queue engine (ME 315: 428d) connected to the received queue (312R) context memory and the transmitter and the receiver (col. 16 lines 40- col. 17 line 2).

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In referring to claim 20 and 21, the network interface further comprises of plurality of ports receiving data from a corresponding plurality of NGIO and further comprising a virtual interface architecture establishing communication with plurality of NGIO links (col. 9 lines 63-col. 10 line 5).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

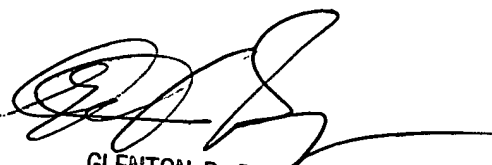
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anita Choudhary whose telephone number is (703) 305-5268. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenton Burgess can be reached on (703) 305-4792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AC
June 2, 2004



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